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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,299

11/26/2003

Raffi Codilian

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06/30/2006

WESTERN DIGITAL TECHNOLOGIES, INC.

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EXAMINER

SEMENENKO, YURIY

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,299

Applicant(s)

CODILIAN, RAFFI

Examiner

Yuriy Semenenko

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendment filed on 5/12/2006 has been entered.
In response to the Office Action dated 2/22/ 2006, Applicants have not amended claims.
Claims 16-20 are newly added.
Claims 1-6 and 16-20 are now pending in the application.

Response to Arguments

- 2.1. Applicant's arguments filed 05/12/2006 have been considered and acknowledged but they are not persuasive.

First of all Sakamoto describes a hard disk assembly same as Applicant's claimed invention, so invention is within the same field of endeavor. Applicant argues with respect to independent claim 1 "Sakamoto does not teach or discuss alignment of electrical components on a printed circuit board... and Sakamoto does not discuss accurate aligning. But Sakamoto describes in Background of the Invention section that accuracy is important for such assembly (page 1, [0004]). And further, if the prior art structure (a disk drive printed circuit board, as Sakamoto disclosed in Fig. 1, board body, a mounting surface disposed upon the board body, and component-dedicated alignment line indicators visibly disposed at the mounting surface for aligning the disk drive electrical component at the mounting surface (see Fig. 2, below), segments with the first and second inner line and so on) is capable of performing the intended use (alignment of the electrical component 10, Fig. 1), then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) AND *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

- 2.2. Applicant's arguments with respect to dependent claims 2-6 are considered and acknowledged but they are not persuasive as based on arguments with respect to independent claim 1 as discussed above.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.1. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al. (PGPub # 2002/0050397) hereinafter Sakamoto.

As to claim 1: Sakamoto discloses in Fig. 1 a disk drive printed circuit board 11 (page 7,[0114]) for use with a disk drive electrical component 10, the disk drive electrical component 10, Fig. 1a (see Fig. 1, below) defining a rectangular perimeter, the perimeter including opposing first and second edges defining a first lateral distance, the perimeter further including opposing third and fourth edges defining a first lateral distance, the perimeter further including opposing third and fourth edges extending between the first and second edges and defining a second lateral distance, the perimeter further including opposing corners defining a diagonal distance, the printed circuit board (Fig. 1, Sakamoto) comprising: a board body 11; a mounting surface disposed upon the board body; and component-dedicated alignment line indicators visibly disposed at the mounting surface for aligning the disk drive electrical component at the mounting surface [Component-dedicated alignment line indicators includes portions of the surface of the first and second insulating sheets P1 and P2, (see Fig. 2, below).] the component-dedicated alignment line indicators including: first and second inner line segments spaced apart a first inner spacing at least the first lateral distance and less than the diagonal distance; third and fourth inner line segments extending between and perpendicular to the first and second inner line segments, the third and fourth inner line segments spaced apart a second inner spacing at least the second

Art Unit: 2841

lateral distance and less than the diagonal distance; and first and second outer line segments disposed parallel to the first and second inner line segments with the first and second inner line segments between the first and second outer line segments, the first and second outer line segments spaced apart a first outer spacing more than the first inner spacing and less than the diagonal distance.

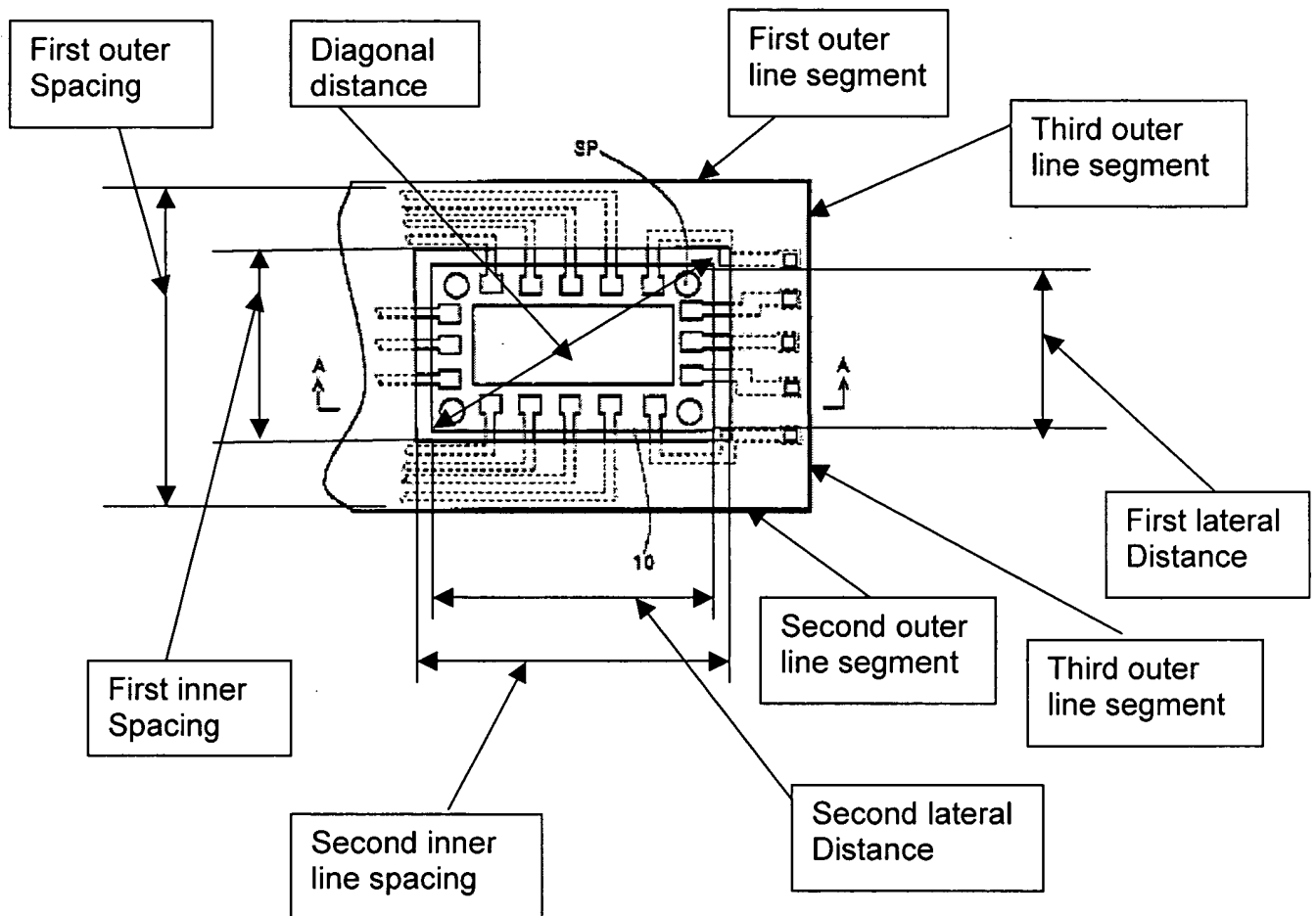


Fig. 1

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.1. Claims 5, 6 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto in view of Bonin et al. (Patent #6798609) hereinafter Bonin.

As to claim 16: Sakamoto discloses (page 4, [0078] and Fig. 25) a hard drive circuit board for use with a disk drive electrical component 10, (see Fig. 1, above) with a rectangular mounting base, comprising: a[rigid] board body 11 (Fig. 1, Sakamoto); a mounting surface on the board body(a top of board 11, Fig. 1, Sakamoto); four inner line segments disposed upon the mounting surface (see Fig. 1, above), wherein the four inner line segments define a rectangle having a width and a length at least as large as a width and a length of the base of the electrical component; and a pair of outer line segments disposed parallel to and spaced apart from two opposing ones of the inner line segments with the two opposing ones of the inner line segments being positioned between the pair of outer line segments (see Fig. 1, above),

except Sakamoto doesn't explicitly teach a board body is a rigid board body [as used in conventional a hard drive (page 5, [0082])].

Bonin teaches a board body is a rigid board body, Fig. 1 and 2.

Therefore it would have been obvious to one of ordinary skill in the art, at time the invention was made, for Sakamoto to include in his invention that a board body is a rigid board body to provide more accuracy of positioning electrical component.

As to claims 5, 6 and 17: Sakamoto discloses the printed circuit board having all of the claimed features as discussed above with respect claim 1(16), and alignment line indicators further includes third outer line segments extending between and perpendicular to the first and second outer line segments, the third and fourth inner line segments spaced apart a second outer spacing at least the second lateral distance and less than the diagonal distance, and wherein the third outer line segments intersect the first and second outer line segments (see Fig. 1, above).

Although, Sakamoto doesn't explicitly teach the component-dedicated alignment line indicators further includes fourth outer line segments extending between and perpendicular to the first and second outer line segments, and wherein the fourth outer line segments intersect the first and second outer line segments. It can use any lines close to a disk drive electrical component such as, for example in Bonin's patent, Fig.3 - beams 33 and 35 are close to the disk drive electrical component 24. This beams are capable of performing the intended use (alignment line indicators) and then it meets the claim (claim 15). See *In re Casey*, 152 USPQ 235 (CCPA 1967) AND *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). And further, it has been held *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) that change in shape and change in size of the configuration of the claimed device was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant. Therefore, at time the invention was made, it was old and well-known to use fourth outer line segments extending between and perpendicular to the first and second outer line segments, and wherein the fourth outer line segments intersect the first and second outer line segments.

Therefore it would have been obvious to one of ordinary skill in the art, at time the invention was made for Ito to include in his invention fourth outer line segments extending between and perpendicular to the first and second outer line segments, and wherein the fourth outer line segments intersect the first and second outer line segments, motivated by its known suitability for its intended use. See MPEP §2144.07.

Art Unit: 2841

As to claim 18: Sakamoto, as modified, discloses the printed circuit board having all of the claimed features as discussed above with respect claim 17 wherein the inner line segments and the outer line segments are visibly disposed on the mounting surface (see Fig. 1, above).

As to claim 19: Sakamoto discloses the printed circuit board having all of the claimed features as discussed above with respect claim 18. Although Sakamoto does not disclose the inner line segments and the outer line segments are applied to the mounting surface using silk screening, Examiner notes that a limitation "applied ... using silk screening," is a process limitation in the product claim. Such a process limitation defines the claimed invention over the prior art only to the degree that it defines the product itself. A process limitation cannot serve to patentably distinguish the product over the prior art, in the case that the product is the same as, or obvious over, the prior art. See Product-by-Process in MPEP 2113 and 2173.05(p) and *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

As to claim 20: Sakamoto discloses the printed circuit board having all of the claimed features as discussed above with respect claim 16,

except Sakamoto doesn't explicitly teach the rectangle formed by the four Inner line segments is sized to circumscribe the based of the electrical component when the electrical component is centered within the four Inner line segments.

Bonin teaches in Fig. 3 the rectangle formed by the four Inner line segments is sized to circumscribe the based of the electrical component 24 when the electrical component 24 is centered within the four Inner line segments.

Therefore it would have been obvious to one of ordinary skill in the art, at time the invention was made, for Sakamoto to include in his invention that the rectangle formed by the four Inner line segments is sized to circumscribe the based of the electrical component when the electrical component is centered within the four Inner line segments to provide more accuracy of positioning electrical component.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

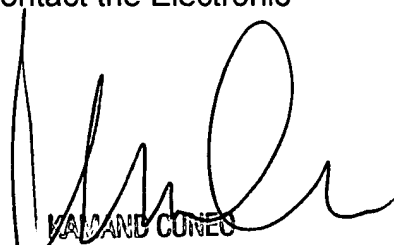
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6.1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuriy Semenenko whose telephone number is (571) 272-6106. The examiner can normally be reached on 8:30am - 5:00pm.

6.2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571)- 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6.3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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